

DOCKET NO.: IBIS-0401  
Application No.: 10/067,017  
Office Action Dated: September 27, 2004

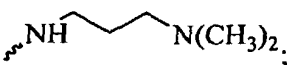
PATENT  
REPLY FILED UNDER EXPEDITED  
PROCEDURE PURSUANT TO  
37 CFR § 1.116

This listing of claims will replace all prior versions, and listings, of claims in the application.

**Listing of Claims:**

1 (canceled).

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2 (currently amended). The compound according to claim 44 wherein  $R_1$  is  $N(\text{alkyl})_2$ ;  
 $R_2$  is  $\text{NHalkyl}$   ~~$\text{NHalkyl}$~~ ; and  
 $R_3$ ,  $R_4$  and  $R_7$  are  $\text{H}$ ; and  $\text{H}$ .  
 $R_5$  is heteroalkyl.

3 (currently amended). The compound according to claim 44 wherein;  
 $R_1$  is a piperazine radical;  
 $R_2$  is ; and  
 $R_5$  is  $\text{-(CH}_2\text{)}_2\text{OH}$   $\text{(CH}_2\text{)}_2\text{OH}$ .

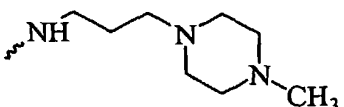
4 (currently amended). The compound according to claim 3 wherein Q is a  
 $\text{C(=O)}$  radical.

5 (currently amended). The compound according to claim 3 wherein Q is a  
 $\text{C(=S)}$  radical.

6 (currently amended). The compound according to claim 3 wherein Q is a  
 $\text{S(=O)}$  radical.

7 (currently amended). The compound according to claim 44 wherein;

$R_1$  is a piperazine radical; and

$R_2$  is 

8 (currently amended).  
C(=O) radical.

The compound according to claim 7 wherein Q is a

9 (currently amended).  
C(=S) radical.

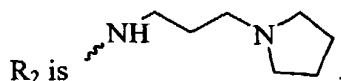
The compound according to claim 7 wherein Q is a

10 (currently amended).  
S(=O) radical.

The compound according to claim 7 wherein Q is a

11 (currently amended).  
R<sub>1</sub> is a piperazine radical; and

The compound according to claim 44 wherein;



12 (currently amended).  
C(=O) radical.

The compound according to claim 11 wherein Q is a

13 (currently amended).  
C(=S) radical.

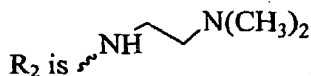
The compound according to claim 11 wherein Q is a

14 (currently amended).  
S(=O) radical.

The compound according to claim 11 wherein Q is a

15 (currently amended).  
R<sub>1</sub> is a piperazine radical; and

The compound according to claim 44 wherein;



16 (currently amended).  
C(=O) radical.

The compound according to claim 15 wherein Q is a

17 (currently amended).  
C(=S) radical.

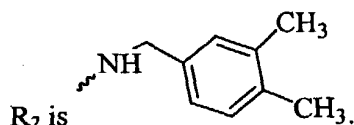
The compound according to claim 15 wherein Q is a

18 (currently amended).  
S(=O) radical.

The compound according to claim 15 wherein Q is a

19 (currently amended).  
R<sub>1</sub> is a piperazine radical; and

The compound according to claim 44 wherein;



20 (currently amended).  
C(=O) radical.

The compound according to claim 19 wherein Q is a

21 (currently amended).  
C(=S) radical.

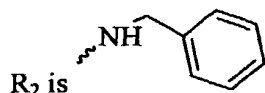
The compound according to claim 19 wherein Q is a

22 (currently amended).  
S(=O) radical.

The compound according to claim 19 wherein Q is a

23 (currently amended).  
R<sub>1</sub> is a piperazine radical; and

The compound according to claim 44 wherein;



24 (currently amended).  
C(=O) radical.

The compound according to claim 23 wherein Q is a

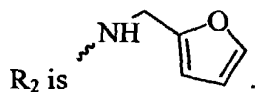
25 (currently amended).  
C(=S) radical.

The compound according to claim 23 wherein Q is a

26 (currently amended). The compound according to claim 23 wherein Q is a S(=O) radical.

27 (currently amended). The compound according to claim 44 wherein;

R<sub>1</sub> is a piperazine radical; and



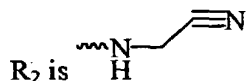
28 (currently amended). The compound according to claim 27 wherein Q is a C(=O) radical.

29 (currently amended). The compound according to claim 27 wherein Q is a C(=S) radical.

30 (currently amended). The compound according to claim 27 wherein Q is a S(=O) radical.

31 (currently amended). The compound according to claim 44 wherein;

R<sub>1</sub> is a piperazine radical; and

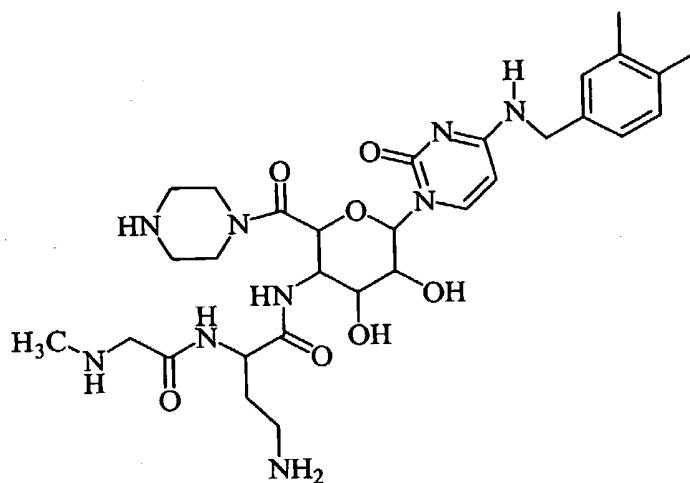


32 (currently amended). The compound according to claim 31 wherein Q is a C(=O) radical.

33 (currently amended). The compound according to claim 31 wherein Q is a C(=S) radical.

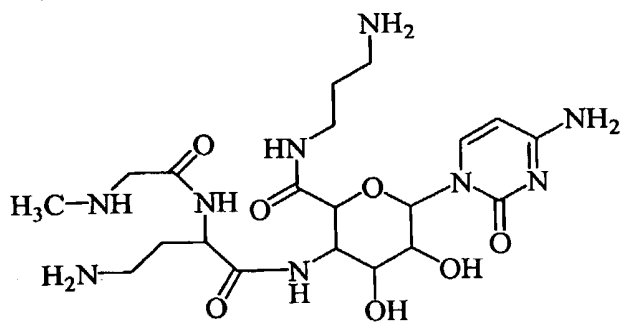
34 (currently amended). The compound according to claim 31 wherein Q is a S(=O) radical.

35 (currently amended). The compound of claim 44 having structure Ia- Ia:



Ia.

36 (currently amended). The compound of claim 44 having according to the graphical representation of structure Ib.



Ib

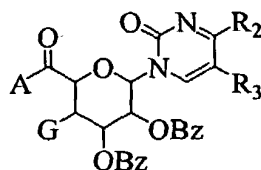
37 (previously presented).  
stereoisomer is predominate.

The compound of claim 44 wherein at least one

38 (previously presented). A pharmaceutical composition comprising: a compound according to claim 44 and pharmaceutically acceptable salts thereof, associated with a pharmaceutically acceptable carrier, diluent, prodrug or lubricant.

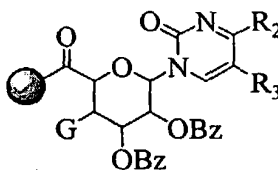
39 (previously presented). A method of making compounds according to claim 44 comprising:

a) associating a compound according to structure III where A is a linker and G is N<sub>3</sub>, with a solid support for generating an intermediate compound associated with the solid support through said linker according to structure IIIa



III

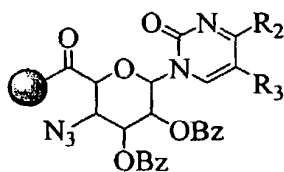
where  is the solid support;



IIIa

b) generating the intermediate compound IIIa associated with the solid support;  
c) chemically manipulating said intermediate compound thereby generating the compound according to claim 44.

40 (original). The method according to claim 39 wherein the intermediate is according to structure IV.



IV

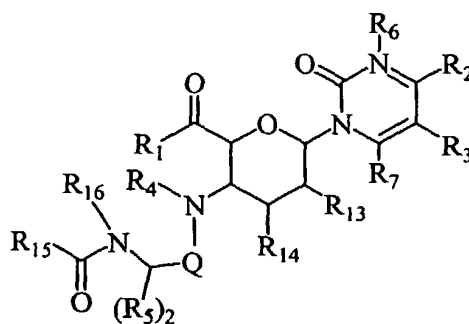
41 (original). The method according to claim 39 wherein the solid support is a resin.

42 (previously presented). A method of using a composition or a pharmaceutically acceptable salt thereof comprising:

- i) obtaining a composition according to claim 38;
- ii) administering said pharmaceutical composition in a pharmaceutically acceptable manner.

43 (previously presented). The method of claim 42 wherein the pharmaceutical composition further comprises a pharmaceutically acceptable diluent, a pharmaceutically acceptable lubricant or a pharmaceutically acceptable carrier.

44 (currently amended). A compound of the formula (I):



I

where:

R<sub>1</sub> is -NR<sub>8</sub>R<sub>9</sub> or -C(R<sub>10</sub>)<sub>3</sub>;

R<sub>2</sub> is -NR<sub>17</sub>R<sub>18</sub>;

$R_3$  and  $R_7$  each independently are  $-NR_{11}R_{12}$ ,  $-YZ$ , alkyl, substituted alkyl, cycloalkyl, ~~heteroalkyl~~, ~~substituted heteroalkyl~~, aryl, heteroaryl, alkylenearyl, arylenealkyl, ~~alkyleneheteroalkyl~~, halo, or H radical;

each  $R_5$  independently is alkyl, substituted alkyl, cycloalkyl, ~~heteroalkyl~~, ~~heteroalkenyl~~, aryl, heteroaryl,  $-(CH_2)_nN(R_{11}R_{12})$ ,  $-(CH_2)_nG$  or H;

$R_6$  is an electron pair, alkyl, cycloalkyl, ~~heteroalkyl~~, aryl, heteroaryl or H;

$R_4$ ,  $R_{11}$ ,  $R_{12}$ ,  $R_{15}$ ,  $R_{16}$  and  $R_{17}$  each independently are alkyl, cycloalkyl, aryl, heteroaryl or H;

$R_8$  and  $R_9$  each independently are alkyl, cycloalkyl, aryl, ~~heteroalkyl~~, heteroaryl, H or together join to form an aminocyclic ring radical;

each  $R_{10}$  independently is alkyl, cycloalkyl, ~~heteroalkyl~~, aryl, heteroaryl, halo or H;

$R_{13}$  and  $R_{14}$  are each hydroxyl;

$R_{18}$  is alkyl, cycloalkyl, aryl, or heteroaryl, 2-(dimethylamino)ethyl, propyl- $L_1$ , or methyl- $L_2$  where  $L_1$  is dimethylamino, 1-methylpiperazinyl, or pyrrolidinyl and  $L_2$  is phenyl, 3,4-dimethylphenyl, 2-methylfuranyl, or cyano;

Y is a heteroatom radical with Z a radical selected from the group comprising 1 or more heteroatoms or H, alkyl, aryl, cycloalkyl, ~~heteroalkyl~~, heteroaryl, halo, combinations thereof and adapted to fill the valence of Y, said Y being singly or doubly bound to the pyrimidine ring radical;

Q is a member selected from the group of radicals comprising  $-S(=O)-$ ,  $-S(O)_2-$ ,  $-C(=O)-$ ,  $-C(=S)-$ ,  $-CH_2-$ ,  $-Y(O)-$  and  $-C(Y)_n-$ ; where G is a cyclic alkyl or cyclic heteroalkyl substituent and n is an integer of at least 0; and with the proviso that;

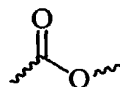
when  $R_2$  is  $\underline{NH_2}$   $\sim NH_2$  and  $R_9$  is  $\underline{H}$   $\sim H$ , then;

$R_8$  is not an amino acid and;

the ratio of carbon atoms to nitrogen atoms of  $R_5$  is greater than or equal to one and;

$R_{16}$  is H radical and;

$R_{15}$  does not comprise a





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radical.